CLAIMS

What is claimed is:

1. A control device for a vehicular AC generator, comprising:

a field current switching circuit unit having a switching transistor for performing switching control of current conducted to a field coil;

a switching transistor control circuit unit for performing intermittent control of the switching transistor based on a battery voltage and a predetermined target voltage;

an internal electric source circuit unit that uses electricity supplied from a battery to form an internal electric source voltage, the internal electric source voltage supplied to the switching transistor control circuit unit;

a casing containing at least one IC or the switching transistor control circuit unit is mold-sealed by resin;

a battery voltage supplying terminal that supplies electricity to the internal electric source circuit unit from the battery via an internal electric source line; and

a magnetic body mounted to the internal

electric source line or the battery voltage supplying terminal; and

wherein the battery voltage supplying terminal and the magnetic body are fixed to the casing.

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2. A control device for a vehicular AC generator, comprising:

a field current switching circuit unit having a switching transistor that performs switching control of current conducted to a field coil;

a switching transistor control circuit unit that performs intermittent control of the switching transistor based on a battery voltage and a predetermined target voltage;

an internal electric source circuit unit that uses electricity supplied from the battery to form an internal electric source voltage, said internal electric source voltage being applied to the switching transistor control circuit unit;

a casing containing at least one IC or the switching transistor control circuit unit is mold-sealed by resin;

a battery voltage supplying terminal for supplying electricity to the internal electric source circuit unit from the battery via an internal electric source line; and

an inductance element connected in series to

the internal electric source line; and

wherein the battery voltage supplying terminal and the inductance element are fixed to the casing.

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3. The control device for a vehicular AC generator, according to claim 1, further comprising:

an IG ON detection terminal connected to an IG ON detection line, the IG detection terminal being connected to one end of an on-board ignition switch directly or through a lamp, said IG ON detection terminal detecting when an ignition switch is ON; and

a magnetic body mounted to the IG ON detection line or the IG ON detection terminal;

wherein the IG ON detection terminal and the magnetic body are fixed to the casing.

4. The control device for a vehicular AC generator, according to claim 1, further comprising:

an IG ON detection terminal connected to an IG ON detection line, said IG ON detection terminal being connected to one end of an on-board ignition switch directly or through a lamp, said IG ON detection terminal detecting when the ignition switch is ON; and

an inductance element mounted in series to the IG ON detection line;

wherein the IG ON detection terminal and the

inductance element are fixed to the casing.

5. The control device for a vehicular AC generator, according to claim 1, further comprising:

a battery voltage detecting terminal connected to a high potential end of a battery for supplying battery voltage for input into the switching transistor control circuit unit through a battery voltage detection line; and

a high frequency bypass capacitor connecting between the battery voltage detection line or the battery voltage detecting terminal and a voltage potential source at a voltage potential equal to a negative potential of the battery;

wherein the battery voltage detecting terminal and the high frequency bypass capacitor are fixed to the casing.

6. The control device for a vehicular AC generator, according to claim 1, wherein the magnetic body is disposed closer to the internal electric source circuit unit than a connection between the battery voltage supplying terminal and the field coil mounted to the battery voltage supplying terminal or the internal electric source line.

7. The control device for a vehicular AC

generator, according to claim 6, wherein the magnetic body is embedded in a connector portion of a resin provided integrally on the casing of a resin.

8. The control device for a vehicular AC generator according to claim 6, wherein the magnetic body is received in a magnetic body receiving groove, said magnetic body receiving groove formed in a concave manner on a bottom surface of a connector portion of a resin provided integrally on the casing.

9. The control device for a vehicular AC generator according to claim 8, wherein a peripheral wall of the connector portion facing the magnetic body receiving groove comprises a rib, said rib narrowing an opening of the magnetic body receiving groove, the peripheral wall and the rib have an elastic deforming characteristics in a direction allowing enlargement of an opening for insertion of the magnetic body into the magnetic body receiving groove.

10. The control device for a vehicular AC generator according to claim 6, wherein the magnetic body is formed from an electrically conductive magnetic material electrically insulated by a resin casing or a resin connector portion.

11. The control device for a vehicular AC generator according to claim 6, wherein the battery voltage supplying terminal or the IG ON detection terminal is flat-plate shaped, a cross section in a direction perpendicular to a lengthwise direction is substantially rectangular in shape, the magnetic body having a slot.

12. The control device for a vehicular AC generator according to claim 11, wherein:

the battery voltage supplying terminal has a ring-shaped tip end having a larger width than a base; and

the magnetic body mounted to the battery voltage supplying terminal has a slot through which the tip end extends.

13. The control device for a vehicular AC generator, according to claim 6, wherein the magnetic body has a plurality of through holes, each of the plurality of terminals extending separately through a respective one of said plurality of through holes.

14. A connector connected to a casing for receiving circuit parts, and having a terminal extending outside of said casing, and having an electrically insulating connector portion to which a base of the terminal is fixed, the connector comprising:

a magnetic body embedded in the connector

portion mounted to the base of the terminal.

15. The connector according to claim 14, wherein the magnetic body is formed from an electrically conductive magnetic material, said magnetic material electrically insulated from the terminal by the connector portion.

16. The connector according to claim 15, wherein the terminal comprises an electric source wiring for supplying of an electric source power to the circuit parts in the casing.

17. A connector connected to a casing for receiving circuit parts, said connector having a terminal extending outside the casing, said connector connected to an electrically insulating connector portion to which a base of the terminal is fixed, the connector comprising:

a magnetic body mounted to the terminal, the magnetic body being received in a magnetic body receiving groove formed in a concave manner on a bottom surface of the connector portion.

18. The connector according to claim 17, wherein a peripheral wall of the connector portion facing the magnetic body receiving groove comprises a rib, the rib narrowing an opening of the magnetic body receiving

groove, the peripheral wall and the rib having an elastic deforming characteristics in a direction enlarging an opening for insertion of the magnetic body into the magnetic body receiving groove.

19. A connector connected to a casing for receiving circuit portions, said connector having a flat-plate terminal that extends outside the casing, said plate terminal having a cross section in a direction perpendicular to a lengthwise direction substantially rectangular in shape, said connector having an electrically insulating connector portion to which a base of the terminal is fixed, the connector comprising:

a magnetic body fixed to the connector portion mounted to the base of the terminal, the magnetic body having a slot through which the terminal extends.

20. The connector according to claim 19, wherein the terminal has a head larger in width than the base, and the magnetic body has a slot through which the head of the terminal extends.

21. A connector connected to a casing for receiving circuit portions, said connector having a plurality of terminals adjacent to one another and extending outside the case, said connector having an electrically insulating connector portion to which the

respective base of the terminals are fixed, the magnetic body having a plurality of through holes, each of said plurality of terminals extending separately through a respective one of said plurality of holes.

22. A connector connected to a casing for receiving circuit portions, said connector having a terminal extending outside said casing, said connector having an electrically insulating connector portion to which a base of the terminal is fixed, the connector portion comprising:

a resin molded part in which electrically insulating magnetic particles are dispersed and filled.